[object; characterized in that] object, said matching material [has] having an acoustic impedance matched to an acoustic impedance of said test object.

2. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection comprising a curved piezoelectric element, and a matching material having an input end surface in close contact with a concave surface of said curved piezoelectric element[,] and an output end surface for fitting to a surface of a polymer material acting as a test [object; characterized in that] object, said matching material [has] having an acoustic impedance matched to an acoustic impedance of said curved piezoelectric element.

3. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 1, [comprising a curved piezoelectric element, and a matching material having an input end surface in close contact with a concave surface of said curved piezoelectric element, and an output end surface for fitting to a surface of a polymer material acting as a test object;

characterized in that] wherein:

said matching material has an acoustic impedance matched to an acoustic impedance of said test object; and

said matching material has an acoustic impedance matched to an acoustic impedance of said curved piezoelectric element.

4. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in [an one of claims 1 - 3, characterized in that] claim 1, wherein said curved piezoelectric element comprises a polymer piezoelectric material.

5. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in [any one of claims 1 - 4, characterized in that] claim 1, wherein the acoustic impedance of said matching material varies from a value matching the acoustic impedance of said curved piezoelectric element toward a value matching the acoustic impedance of said test object, with respect to a direction of propagation from said input end surface to [the] said output end surface of a longitudinal ultrasonic wave launched by said curved piezoelectric element.

6. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in [any one of claims 1 - 5 characterized in that] claim 1, wherein

said matching material is divided into a first matching material and a second matching material, said first matching material having one end surface [thereof] formed as said input end surface[,] and the other end surface formed as a first transition end surface, said second matching material having one end surface [thereof] formed as said output end surface[,] and the other end surface formed as a second transition end surface for close contact with said first transition end surface, said first transition end surface having an acoustic impedance matched to an acoustic impedance of said second transition end surface.

7. (Amended) A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 6, [characterized in that] wherein said second matching material is attachable to and detachable from said first matching material.

8. (Amended) [In a] A flaw evaluating apparatus for an ultrasonic flaw detecting apparatus for transmitting ultrasonic wave to a polymer material acting as a test object, and receiving echoes returning [therefrom;] therefrom, the flaw evaluating apparatus [for an ultrasonic flaw detection apparatus is characterized by] comprising a first gate circuit for generating a first gate for an echo from a predetermined

reflection source in said test object, a second gate circuit for generating a second gate for flaw detection in a position of a predetermined time delay from said first echo, a first evaluating circuit for determining that a flaw has been detected when an amplitude of said first echo exceeds a predetermined level, and a second evaluating circuit for determining that a flaw has been detected when an echo occurs at said second gate.

9. (Amended) A flaw evaluating apparatus as defined in claim 8, [characterized in that] <u>wherein</u> said second gate circuit is operable to vary an interval time between said first echo and said second gate following a variation in sound velocity in said test object.

10. (Amended) A flaw evaluating apparatus for an ultrasonic flaw detection apparatus as defined in claim 8, [characterized in that] <u>wherein</u> said first gate circuit is operable to vary an interval time between a surface echo and said first gate following a variation in sound velocity in said test object.

11. (Amended) A flaw evaluating apparatus for an ultrasonic flaw detection apparatus as defined in claim 9 [or 10, characterized in that] <u>, wherein</u> said variation in sound velocity

in said test object is determined by measuring an interval time between echoes from two predetermined reflection sources in said test object.

--12. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 2, wherein said curved piezoelectric element comprises a polymer piezoelectric material.

13. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 3, wherein said curved piezoelectric element comprises a polymer piezoelectric material.

14. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 2, wherein the acoustic impedance of said matching material varies from a value matching the acoustic impedance of said curved piezoelectric element toward a value matching the acoustic impedance of said test object, with respect to a direction of propagation from said input end surface to said output end surface of a longitudinal ultrasonic wave launched by said curved piezoelectric element.

15. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 3, wherein the acoustic impedance of said matching material varies from a value matching the acoustic impedance of said curved piezoelectric element toward a value matching the acoustic impedance of said test object, with respect to a direction of propagation from said input end surface to said output end surface of a longitudinal ultrasonic wave launched by said curved piezoelectric element.

16. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 4, wherein the acoustic impedance of said matching material varies from a value matching the acoustic impedance of said curved piezoelectric element toward a value matching the acoustic impedance of said test object, with respect to a direction of propagation from said input end surface to said output end surface of a longitudinal ultrasonic wave launched by said curved piezoelectric element.

17. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 2, wherein said matching material is divided into a first matching material and a second matching material, said first matching material

having one end surface formed as said input end surface and the other end surface formed as a first transition end surface, said second matching material having one end surface formed as said output end surface and the other end surface formed as a second transition end surface for close contact with said first transition end surface, said first transition end surface having an acoustic impedance matched to an acoustic impedance of said second transition end surface.

18. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 3, wherein said matching material is divided into a first matching material and a second matching material, said first matching material having one end surface formed as said input end surface and the other end surface formed as a first transition end surface, said second matching material having one end surface formed as said output end surface and the other end surface formed as a second transition end surface for close contact with said first transition end surface, said first transition end surface having an acoustic impedance matched to an acoustic impedance of said second transition end surface.

19. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 4, wherein said matching material is divided into a first matching material and a second matching material, said first matching material having one end surface formed as said input end surface and the other end surface formed as a first transition end surface, said second matching material having one end surface formed as said output end surface and the other end surface formed as a second transition end surface for close contact with said first transition end surface, said first transition end surface having an acoustic impedance matched to an acoustic impedance of said second transition end surface.

20. A focus type longitudinal wave ultrasonic probe for polymer material inspection as defined in claim 5, wherein said matching material is divided into a first matching material and a second matching material, said first matching material having one end surface formed as said input end surface and the other end surface formed as a first transition end surface, said second matching material having one end surface formed as said output end surface and the other end surface formed as a second transition end surface for close contact with said first

transition end surface, said first transition end surface having an acoustic impedance matched to an acoustic impedance of said second transition end surface.

21. A flaw evaluating apparatus for an ultrasonic flaw detection apparatus as defined in claim 10, wherein said variation in sound velocity in said test object is determined by measuring an interval time between echoes from two predetermined reflection sources in said test object.--

<u>IN THE ABSTRACT</u>:

Please delete the Abstract of the Invention as currently on file and substitute therefor the new Abstract Of The Invention included herewith as a separately typed page.

## REMARKS

The specification has been amended to place the application in conformance with standard United States Patent practice.

Claims 1-11 have been amended to eliminate the multiple dependencies and to bring the claims into conformance with standard United States Patent practice. New claims 12-21 have been added to more fully define the invention.